

REMARKS/ARGUMENTS

Favorable consideration of this application, as presently amended and in light of the following discussion, is respectfully requested.

Claims 12-25 are pending in the application.

In the outstanding Office Action, Claims 23-25 were rejected under 35 U.S.C. § 102(e) as being anticipated by Schlekewey et al. (U.S. Patent No. 6,181,276, hereafter Schlekewey); Claims 12-14, 17, 19, and 20 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Schlekewey in view of Martek et al. (U.S. Patent No. 5,969,689, hereinafter Martek); Claim 18 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Schlekewey and Martek in view of Keskitalo et al. (U.S. Patent No. 5,966,670, hereinafter Keskitalo); Claims 21-22 were allowed; and Claims 15 and 16 were indicated as containing allowable subject matter.

Applicants acknowledge with appreciation the indication of allowable subject matter.

Briefly recapitulating, Claim 12 is directed to a method of distributing communications established by radio-communication terminals, within a geographic cell of a radio-communications network, where the geographic cell is subdivided into at least two geographic sectors. The improvement comprises synchronously rotating an orientation of all of the at least two geographic sectors if a) a total transmission rate of one of the at least two geographic sectors than a predetermined total transmission rate, or b) a number of links established in one of the at least two geographic sectors is greater than a predetermined number of links. With Applicants' invention, links may be more effectively shifted and shared in a mobile network.

Schlekewey describes systems and methods for providing transition between sector configurations of a multisector cell wherein the subscriber units may detect the impending change in sector configuration and react accordingly. Sector transitions accomplished

according to Schlekewey include the use of time dithering old and new sector signals on antenna beams of the transition area, amplitude tapering of old and new sector signals on antenna beams of the transition area, the landing of sector signals on antenna beams of the transition area, phase adjustment of antenna beams of the transition area, as well as combinations thereof. Accordingly, subscriber units in the transition area are able to detect the impending sector reconfiguration and react in order to avoid degradation and loss of communications.¹

However, contrary to the Official Action, Schlekewey fails to disclose or suggest rotating an orientation of all of at least two geographic sectors if a (a total transmission rate of one of said at least two geographic sectors is greater than a predetermined total transmission rate, or a number of links establishing one of said at least two geographic sectors is greater than a predetermined number of links. The Official Action acknowledges that Schlekewey does not disclose or suggest Applicant's claimed "a total transmission rate of one of said at least two geographic sectors is greater than a predetermined total transmission rate." However the Official Action asserts that Schlekewey discloses Applicant's claimed "a number of links establishing at least one of said at least two geographic sectors is greater than a predetermined number of links." For support of this assertion the Official Action points to Schlekewey, column 4, lines 60-66, column 6, line 60 to column 7, line 2, column 8, line 55 to column 9, line 5, and column 9, lines 10-43. The cited sections of Schlekewey are reproduced below.

Column 4, lines 60-66 of Schlekewey recites:

A technical advantage of the present invention is that as loading of a cell changes during operation, so too can the configuration of cell sectors, such as adjusting sector azimuth pointing angles and/or sector beam widths, be dynamically adjusted to meet these changes in loading without causing

¹ Schlekewey Abstract.

undesired effects to ongoing communications during a sector reconfiguration.

However, contrary to the Official Action, this section of Schlekewey fails to include any reference to “synchronously rotating an orientation of all of the at least two geographic sectors if ...**a number of links** establishing at least one of said at least two geographic sectors **is greater than a predetermined number of links.**” That is, the generic mention of loading as a basis for changing sector configurations does not disclose or suggest rotating let alone rotating based on a number of links in a sector.

Column 6, line 60 through column 7, line 2 of Schlekewey recites:

However, loading of sectors is often cyclic or dynamic in nature rather than constant. Accordingly, during certain times of day, such as business commuting times, a particular sector, such as a sector encompassing an urban high way, may service more users than during other times of the day. Therefore, during particular times a particular area or areas of the cell may require increased capacity in order to service all users whereas at other times the cells' capacity might be better utilized when spread more homogeneously throughout the cells coverage area.

However, contrary to the Official Action, this section of Schlekewey fails to include any reference to “synchronously rotating an orientation of all of the at least two geographic sectors if ...**a number of links** establishing at least one of said at least two geographic sectors **is greater than a predetermined number of links.**” That is, the generic mention of loading does not disclose or suggest rotating based on a number of links in a sector.

Column 8, line 55 through column 9, line 5 recite:

In order to synthesize the desired radiation patterns, the circuitry of Figure 4a operates to switch a particular input associated with the desired radiation pattern, i.e., a sector output of a cell site transmitter, to a selected number of the antenna beams determined to produce the desired radiation pattern. For example, where the number of beams N of the preferred embodiment of Figure 4a is 12 and the number of inputs of the first service area is three, a three sectored cell may be synthesized as illustrated in Figure 2a by properly switching switch matrixes 411-413. To provide the \forall sector signal in an

area corresponding to sector 211a of Figure 2, switch matrix 411 is manipulated to provide the ∇ sector signal to antenna beams 1-4, corresponding to beams 311-314 of Figure 3. Similarly the signals of the \exists sector signal are provided to antenna beams 5-8, corresponding to beams 315-318 in Figure 3, and the signals of the $($ sector signal are provided to antenna beams 9-12, corresponding to beams 319-322 of Figure 3, through manipulation of switch matrixes 412 and 413 respectively.

However, contrary to the Official Action, this section of Schlekewey fails to include any reference to “synchronously rotating an orientation of all of the at least two geographic sectors if ...**a number of links** establishing at least one of said at least two geographic sectors **is greater than a predetermined number of links.**” That is, the generic mention of selecting radiation patterns does not disclose or suggest rotating let alone rotating based on a number of links in a sector.

Column 9, line 43 of Schlekewey recites:

It shall be appreciated that the switching of signals to beams is not limited to non-overlapping sectors that describe the above example. By switching movable input signals to a same beam, sectors may be defined which overlap, or partially overlap, if desired. Moreover there is no requirement that all the available beams be used in a sector mapping. For example, where coverage is not required in an area, the antenna beams associated therewith may not be switched to any sector input signal. Moreover, it shall be appreciated that the size and orientation of sectors synthesized are limited only by the particular beam to which a signal is switched. Accordingly, the sectors may be controlled to provide a different azimuth grid point alignment, as desired, such as to conform to local traffic, terrain features, blockages, or interference (in band or out of band) conditions. In order to provide automatic manipulation of the switch matrixes of the present invention, a controller is coupled thereto as shown. Specifically, controller 401, adapted to manipulate switches matrixes 411-413, is provided to form desired sector configurations. Additionally, controller 401 is also adapted to manipulate switch matrixes 411-413, attenuators 431-439, as well as phase shifters 451-459 to transition between sector configurations according to the present invention as will be discussed hereinbelow. It shall be appreciated that although a single controller is illustrated, these devices may in fact be controlled by any number of discrete

controllers working alone or in concert to provide operation as described herein.

However, contrary to the Official Action, this section of Schlekewey fails to include any reference to “synchronously rotating an orientation of all of the at least two geographic sectors if ...**a number of links** establishing at least one of said at least two geographic sectors **is greater than a predetermined number of links.**” That is, the generic mention of switching of signals to beams (overlapping or non-overlapping) does not disclose or suggest rotating let alone rotating based on a number of links in a sector.

Thus, regarding the rejection of Claims 23-25 under 35 U.S.C. § 102(e), MPEP § 2131 notes that “[a] claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.” *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). “When a claim covers several structures or compositions, either generically or as alternatives, the claim is deemed anticipated if any of the structures or compositions within the scope of the claim is known in the prior art.” *Brown v. 3M*, 265 F.3d 1349, 1351, 60 USPQ2d 1375, 1376 (Fed. Cir. 2001) (claim to a system for setting a computer clock to an offset time to address the Year 2000 (Y2K) problem, applicable to records with year date data in “at least one of two-digit, three-digit, or four-digit” representations, was held anticipated by a system that offsets year dates in only two-digit formats). See also MPEP § 2131.02. “The identical invention must be shown in as complete detail as is contained in the ... claim.” *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). Because Schlekewey does not disclose or suggest all the features recited in independent Claim 23, Schlekewey does not anticipate the invention recited in independent Claim 23, and all claims depending therefrom.

Regarding the rejection of Claims 12-14 and 17-20 under 35 U.S.C. § 103(a), Applicants note that Martek and Keskitalo properly are not cited for a teaching of

“synchronously rotating an orientation of all of the at least two geographic sectors if ...a **number of links** establishing at least one of said at least two geographic sectors **is greater than a predetermined number of links.**” MPEP §706.02(j) notes that to establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. Also, the teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art and not based on applicant’s disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). Without addressing the first two prongs of the test of obviousness, Applicants submit that the Official Action does not present a *prima facie* case of obviousness because both Schlekewey, Martek and Keskitalo fail to disclose all the features of recited in independent Claims 12 and 19.

Accordingly, in view of the present amendment and in light of the previous discussion, Applicants respectfully submit that the present application is in condition for allowance and respectfully request an early and favorable action to that effect.

Respectfully submitted,

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